

REMARKS

Reconsideration and allowance of this application are respectfully requested in light of the above amendments and the following remarks.

The Abstract has been amended to better conform with U.S. practice and, thereby, overcome the applied objection.

Fig. 3 has been amended to overcome the objection applied to the drawings. More specifically, reference character 303 has been removed from Fig. 3.

The specification has been amended in the manner suggested in the Office Action for overcoming the applied objections. No new matter is believed to be introduced by the amendments of the specification.

Claims 1-37 have been cancelled in favor of new claims 38-46. Claims 38-46 have been drafted to avoid the issues underlying the indefiniteness rejections applied to claims 24-28 and the 35 USC 101 rejections applied to claims 31-37. Support for the subject matter of the new claims is provided in the original claims and paragraphs [0046], [0048], and [0114] of the published specification. (References herein to the specification and drawings are for illustrative purposes only and are not intended to limit the scope of the invention to the referenced embodiments.)

Claims 1, 9-12, 29-31, 33, and 34 were rejected, under 35 USC §102(b), as being anticipated by Nagaoka et al. (US 2001/0012322). Claims 1, 14, and 29-31 were rejected, under 35 USC §102(b), as being anticipated by Kunieda et al. (JP 2000-269918). Claims 1, 9-13, 20-22, 29-31, and 33-36 were rejected, under 35 USC §103(a), as being unpatentable over Lee et al. (US 2003/0060173) in view of Nagaoka. Claims 2-9, 12, 19, and 32-34 were rejected, under 35

USC §103(a), as being unpatentable over Kunieda in view of Sudo (JP 2001-156744). Claims 2-4 were rejected, under 35 USC §103(a), as being unpatentable over Kunieda in view of Hayama et al. (US 2002/0003787). Claims 15-19 were rejected, under 35 USC §103(a), as being unpatentable over Kunieda in view of Yano (JP 2002-094393). Claims 23-28 and 37 were rejected, under 35 USC §103(a), as being unpatentable over Kunieda in view of Omoto et al. (JP 2001-168821). To the extent these rejections may be deemed applicable to new claims 38-46, the Applicant respectfully traverses based on the points set forth below.

Claim 38 recites features of original claims 1, 19, and 25 and defines a multicarrier transmitting apparatus that allocates high quality transmit data to subcarriers in the vicinity of a center frequency of a predetermined frequency domain and allocates other, ordinary transmit data to subcarriers in the vicinity of the ends of the frequency domain. Additionally, the apparatus varies, in accordance with channel quality, the range of subcarriers to which the high-quality and ordinary transmit data are allocated. The claimed subject matter provides an advantage of reducing the effects that interfering signals of nearby carrier frequencies have on the reception of the high-quality transmit data so as to improve communication efficiency (see specification page 2, lines 1-23).

It is submitted that the teachings of the applied references do not suggest the Applicant's claimed subject matter of varying, in accordance with channel quality, the range of subcarriers to which high-quality and ordinary transmit data are allocated. The Office Action appears to acknowledge that Nagaoka, Kunieda, and Lee do not disclose this subject matter, by citing Sudo, Yano, and Omoto for such disclosure (see Office Action page 14, second paragraph, page 18, second paragraph, and the paragraph bridging pages 19 and 20).

More specifically, the Office Action proposes that Sudo discloses, in paragraphs [0047]-[0049], narrowing a range of subcarriers to which high-quality data is allocated in accordance with channel quality (see Office Action page 14, second paragraph). However, Sudo actually discloses spreading each signal provided to a subcarrier in the cited paragraphs and discloses nothing similar to the Applicant's claimed subject matter of varying a range of subcarriers to which high-quality data is allocated in accordance with channel quality.

With respect to claim 19, the Office Action proposes that Yano discloses varying transmission power in accordance with channel quality (see Office Action page 18, second paragraph). However, claim 19 did not recite anything similar to varying transmission power in accordance with channel quality, and the Office Action does not propose that Yano discloses the subject matter actually recited in claim 19.

With respect to claim 25, the Office Action proposes that Omoto discloses varying the number of subcarriers to which ordinary transmit data is allocated in accordance with channel quality (see Office Action page 19, lines 4-6 of last paragraph). However, Omoto actually discloses mapping priority data to subcarriers having low detected interference (i.e., high channel quality) in the cited paragraphs. Omoto does not disclose varying the number of subcarriers to which transmit data is allocated in accordance with channel quality.

Hayama is not cited for supplementing the teachings of Nagaoka, Kunieda, Lee, Sudo, Yano, and Omoto with regard to varying the number of subcarriers to which transmit data is allocated in accordance with channel quality.

Accordingly, the Applicant submits that Nagaoka, Kunieda, Lee, Sudo, Yano, Omoto and Hayama, considered individually or in combination, do not anticipate or render obvious the

subject matter defined by claim 38. Independent claim 46 similarly recites the above-mentioned subject matter distinguishing apparatus claim 38 from the applied references, but with respect to a method. Therefore, allowance of claims 38 and 46 and all claims dependent therefrom is warranted.

To promote a better understanding of the patentable distinctions of the Applicant's claimed subject matter over the applied references, the Applicant provides the following additional remarks.

Features of the claimed invention include: (1) rearranging high-quality transmit data and ordinary transmit data such that the high-quality transmit data is allocated to subcarriers in the vicinity of the center frequency in a predetermined frequency domain and the ordinary transmit data is allocated to subcarriers in the vicinity of both ends in the predetermined frequency domain and (2) varying in accordance with channel quality a range of subcarriers to which the high-quality transmit data is allocated and a range of subcarriers to which the ordinary transmit data is allocated.

Lec and Nagaoka do not disclose the above-mentioned feature (1). Kunieda and Omoto do not disclose feature (2).

Regarding feature (1), although Nagaoka discloses layering a video signal into two layers (see Nagaoka paragraph [0085]), Nagaoka does not disclose the quality of each layered bit stream. Further, although the Office Action proposes that Nagaoka's block 103, in Fig. 1, and paragraphs [0083]-[0086] disclose a configuration corresponding to feature (1) of the claimed invention, these proposed parts of Nagaoka do not disclose subcarriers to which layered bit

streams are allocated. And the Office Action acknowledges that Lee does not disclose feature (1) (see Office Action page 8, lines 2-4).

Regarding feature (2), although Omoto discloses designating subcarriers to which transmission information is allocated based on a noise signal level, Omoto does not disclose varying the number of subcarriers to which information is allocated based on the noise signal level. And the Office Action acknowledges that Kunieda does not disclose feature (2).

In view of the above, it is submitted that this application is in condition for allowance, and a notice to that effect is respectfully solicited.

If any issues remain which may best be resolved through a telephone communication, the Examiner is requested to telephone the undersigned at the local Washington, D.C. telephone number listed below.

Respectfully submitted,

/James Edward Ledbetter/

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JEL/DWW/att

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